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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Christian Simon

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EXAMINER

FEELY, MICHAEL J

ART UNIT

PAPER NUMBER

1796

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/531,473	<b>Applicant(s)</b> SIMON ET AL.	
	<b>Examiner</b> Michael J. Feely	<b>Art Unit</b> 1796	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 28 June 2010.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 2-7, 18 and 22-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2-7, 18 and 22-28 is/are rejected.
- 7) ☒ Claim(s) 2-7, 18 and 22-28 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)                        | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Pending Claims***

Claims 2-7, 18, and 22-28 are pending.

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on June 28, 2010 has been entered.

### ***Election/Restrictions***

2. Claims 8-14 were previously withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was *effectively* made **without** traverse in the reply filed on August 19, 2008. Claims 8-14 have been cancelled.

### ***Response to Amendment***

3. The rejection of claims 15-17 under 35 U.S.C. 112, second paragraph, has been rendered moot by the cancellation of these claims.

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4. The rejection of claims 1, 15-17, and 19 under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Krass et al. (DE 10117338 A1) has been rendered moot by the cancellation of these claims.

5. The rejection of claims 7 and 18 under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Krass et al. (DE 10117338 A1) has been overcome by amendment.

6. The rejection of claim 20 under 35 U.S.C. 103(a) as being unpatentable over Krass et al. (DE 10117338 A1) has been rendered moot by the cancellation of this claim.

7. The provisional rejection of claims 1 and 15-17 on the ground of nonstatutory obviousness-type double patenting as being unpatentable over the combined limitations of claims 1-17 of copending Application No. 11/578,078 (US 2007/0290176) has been rendered moot by the cancellation of these claims.

8. The provisional rejection of claims 1, 15-17, 19, and 20 on the ground of nonstatutory obviousness-type double patenting as being unpatentable over the combined limitations of claims 1-24, 26, and 27 of copending Application No. 11/578,470 (US 2007/0260030) has been rendered moot by the cancellation of these claims.

9. The provisional rejection of claims 1, 15-17, 19, and 20 on the ground of nonstatutory obviousness-type double patenting as being unpatentable over the combined limitations of claims 1, 2, and 4 of copending Application No. 11/578,471 (US 2008/0039607) has been rendered moot by the cancellation of these claims.

***Claim Objections***

10. Claim 25 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. All the limitations set forth in claim 25 have been previously introduced in parent claims 24 and 22.

11. Claims 2-7, 18, and 22-28 are objected to because of the following informalities: it appears that a comma should be placed after “solvent” in the following limitation of claim 22: “wherein the reaction product obtained by the hydrolysis and condensation includes the solvent particle forming condensate products which have free amino groups on the surface, and volatile components which include alcohols and water”. Claims 2-7, 18, and 23-28 are objected to because they are dependent from claim 22. Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

12. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

13. Claim 23 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 23, it is unclear how these materials maintain their function as *hardeners for curing of epoxy resins* when the free amino groups at the surface of the particle-

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forming condensation product in the sol have been converted. This is particularly unclear when all of the amino groups are consumed by conversion (*entirely converted*), yielding a non-reactive particle.

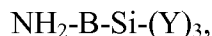
14. Claims 2-7, 18, and 22-28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claim 22, the limitation "the reaction product" is introduced without proper antecedent basis. Accordingly, it is unclear if this reaction product is the actual *sol*, a portion of the *sol*, a precursor of the *sol* or something entirely different from the *sol*. Claims 2-7, 18, and 23-28 are rejected because they are dependent from claim 22. The following is suggested claim language for claim 22:

22. (suggested language) A hardener for the curing of epoxy resins, said hardener comprising a sol produced by:

hydrolyzing and condensing of a silane compound in a solvent, yielding a reaction product comprising the solvent, particle-forming condensate products, and volatile components; and

removing at least a portion of the volatile components, yielding the sol;

wherein the silane compound is represented by the formula:



where:

B is a spacing group chosen from saturated or unsaturated C<sub>1</sub>-C<sub>18</sub> alkylene and substituted or non-substituted arylene; wherein said alkylene and arylene optionally feature a

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carbon chain segment including one or more of: oxygen, nitrogen, sulphur, phosphorus, silicon and boron; and

Y is ethoxy or methoxy;

wherein the particle-forming condensate products have reactive amino group on the surface thereof; and

wherein the volatile components comprise alcohols and water.

### ***Claim Interpretation***

15. Claims 2-7, 22, 23, and 26-28 are drawn to a hardener; claims 24 and 25 are drawn to a method of using the hardener; and claim 18 is drawn to an epoxy resin cured with the hardener. The hardener limitations are set forth in *product-by-process* format.

In light of this, it has been found that, “[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process,” – *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985) (*see MPEP 2113*).

Accordingly the claimed *product-by-process* has the following material limitations: a hardener comprising a sol, wherein the sol comprises:

- a solvent; and

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- particle forming condensate products having free (*reactive*) amino groups on the surface thereof, wherein said particle forming condensate products are derived from a silane (*precursor*) compound represented by the formula:  $\text{NH}_2\text{-Si-(Y)}_3$ .

The sol has a reduced quantity of volatile (*by-product*) compounds, wherein said volatile compounds comprise alcohols and water. Furthermore, it is important to note that condensate products are not actually particles; rather, they are capable of *forming* particles.

### ***Claim Rejections - 35 USC § 103***

16. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

17. Claims 7, 18, 22-25, 27, and 28 are rejected under 35 U.S.C. 103(a) as obvious over Krass et al. (DE 10117338 A1).

Regarding claims 7, 18, 22-25, 27, and 28, Krass et al. disclose: **(22, 27 & 28)** a hardener for the curing of epoxy resins comprising a sol (Abstract; paragraph 0010 (*component b*); paragraph 0013), wherein the sol comprises:

- a solvent (paragraph 0014); and
- particle forming condensate products having free (*reactive*) amino groups on the surface thereof, wherein said particle forming condensate products are derived from a silane (*precursor*) compound represented by the formula:  $\text{NH}_2\text{-Si-(Y)}_3$  (paragraph 0013);



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(7) wherein the hardener also comprises at least one additive (paragraph 0010 (*component c*); paragraphs 0015-0016);

(23) wherein more or less free amino groups at the surface of the particle-forming condensation product in the sol has been entirely or partly converted with reactive compounds *such as* epoxides, acid derivatives, blocked and non-blocked isocyanates and compounds of the type R-X where X is a suitable atom or atom group that may be replaced and R is an organic residue or a fraction of such residue (*at least partially consumed when reacted with epoxy resin; furthermore, scope is open to any reactive compound: see "such as" language*);

wherein X is chosen among halogen, substituted or non-substituted alkoxyl, phenoxy, amine, carboxylate, sulphonate, sulphinate, phosphonate and phosphinate (*not required: scope open to any/full list of reactive compounds in claim 23*);

wherein R is chosen among non-substituted saturated and unsaturated C<sub>1</sub>-C<sub>24</sub> alkyl, substituted saturated or unsaturated C<sub>1</sub>-C<sub>24</sub> alkyl, substituted or non-substituted aryl, aliphatic or aromatic carbonyl, wherein the carbon chains of said compounds may optionally include one or more of the elements nitrogen, sulphur, silicon and boron and groups chosen among condensation products of one or more type of chemical compounds such as acids, alcohols, phenols, amines, aldehydes and epoxides (*not required: scope open to any/full list of reactive compounds in claim 23*);

(18) a cured epoxy material (Abstract; paragraph 0010), manufactured from an epoxy resin (paragraph 0010 (*component a*); paragraphs 0011-0012 ) and a hardener as defined by claim 22 (paragraph 0010 (*component b*); paragraph 0013);

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(24 & 25) a method for curing epoxy resins (Abstract; paragraph 0010), comprising the steps of:

- (i) producing the sol as defined by claim 22 (paragraph 0013: *sol-gel technique*); and
- (ii) mixing the sol, subsequent to possible storage, with an epoxy resin so that the epoxy resin is cured (paragraph 0010).

Krass et al. fail to explicitly disclose: (7, 18, 22, 23, 27 & 28) wherein the sol has a reduced quantity of volatile (*by-product*) compounds, wherein said volatile compounds comprise alcohols and water; (24 & 25) wherein the sol is produced by removing (*at least a portion of*) the volatile compounds from the reaction product.

However, it appears that these limitations are drawn to the mere *purification* of the sol, wherein unwanted by-products are removed prior to use. In light of this, it has been found that: purer forms of known products may be patentable, but the mere purity of a product, by itself, does not render the product unobvious – *see MPEP 2144.04*.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to remove at least a portion of the volatile by-products from the sol of Krass et al. because: (a) it appears that instantly claimed volatile-removal limitations are drawn the mere *purification* of the sol, wherein unwanted by-products are removed prior to use; and (b) it has been found that: purer forms of known products may be patentable, but the mere purity of a product, by itself, does not render the product unobvious.

18. Claims 7, 18, and 22-28 are rejected under 35 U.S.C. 103(a) as obvious over Krass et al. (DE 10117338 A1) and further in view of Sakamoto et al. (US Pat. No. 5,496,402).

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Regarding claims 7, 18, 22-25, 27, and 28, the teachings of Krass et al. are as set forth above and incorporated herein. Krass et al. fail to explicitly disclose: **(7, 18, 22, 23, 27 & 28)** wherein the sol has a reduced quantity of volatile (*by-product*) compounds, wherein said volatile compounds comprise alcohols and water; and **(24 & 25)** wherein the sol is produced by removing (*at least a portion of*) the volatile compounds from the reaction product.

Sakamoto et al. also disclose a sol produced by hydrolyzing and condensing silane materials in a solvent, yielding a reaction product comprising the solvent, particle-forming condensate products, and volatile components (column 4, line 35 through column 5, line 66). Furthermore, they reduce the content of unwanted alcoholic by-products through distillation (*see column 5, line 66 through column 6, line 6*). This is done to enhance storage stability because an excessive amount of alcoholic by-products react with active-hydrogen atoms present in the condensate, which leads to premature gelation of the condensate (*see column 5, lines 48-66*). Furthermore, it appears that the distillation conditions (*see column 6, lines 6-16*) would have also resulted in a reduction of water content.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to remove at least a portion of the volatile by-products from the sol of Krass et al. because: (a) Sakamoto et al. also disclose a sol produced by hydrolyzing and condensing silane materials in a solvent, yielding a reaction product comprising the solvent, particle-forming condensate products, and volatile components; (b) Sakamoto et al. further reduce the content of unwanted alcoholic by-products through distillation to enhance storage stability because an excessive amount of alcoholic by-products react with active-hydrogen atoms present in the condensate, which leads premature gelation of the condensate; and (c) furthermore, it appears

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that the distillation conditions of Sakamoto et al. would have also resulted in a reduction of water content.

Regarding claim 26, the combined teachings of Krass et al. and Sakamoto et al. are as set forth above and incorporated herein. Krass contemplate a number of polar solvents, such as ethyleneglycol monobutylether (*see paragraph 0014*); however, they fail to disclose: **(26)** a mixture of butyldiglycol (*diethyleneglycol monobutyl ether*) and water.

Sakamoto et al. contemplate a number of suitable solvents to be admixed with water in their sol technique (*see column 4, line 41-67*). This includes ethyleneglycol monobutyl ether (*see column 4, lines 48-49*) and diethyleneglycol monobutyl ether (*see column 4, lines 50-51*). In light of this, it has been found that the selection of a known material based on its suitability for its intended use supports a *prima facie* obviousness determination – *see MPEP 2144.07*.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the instantly claimed solvent in the sol of Krass et al. because the teachings of Sakamoto et al. establish that both ethyleneglycol monobutyl ether (*disclosed by Krass et al.*) and diethyleneglycol monobutyl ether are recognized in the art as a suitable solvents to be admixed with water for a sol technique.

19. The rejection of claims 2-7 under 35 U.S.C. 103(a) as being unpatentable over Krass et al. (DE 10117338 A1) in view of Hata et al. (US Pat. No. 6,033,749) *stands*.

20. Claims 2-7 are also rejected under 35 U.S.C. 103(a) as obvious over Krass et al. (DE 10117338 A1) in view of Sakamoto et al. (US Pat. No. 5,496,402) and Hata et al. (US Pat. No. 6,033,749).

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Regarding claims 2-7, the teachings of Krass et al. and Sakamoto et al. are as set forth above and incorporated herein. Krass et al. disclose that their composition (including hardener) is useful for the production of fuel tanks; however, they fail to explicitly disclose: **(2)** wherein the hardener also comprises at least one UV-absorber; **(3)** at least one free radical scavenger; **(4)** at least one antioxidant; **(5)** at least one dye and/or pigment; and **(6)** at least one filler.

The teachings of Hata et al. are directed to a fuel tank of multilayer construction (*see Abstract*). They disclose that each layer may be incorporated with: **(7)** additives (*see column 6, lines 27-30*), such as **(3)** free radical scavengers (*see column 6, lines 31-35; antioxidants act as free radical scavengers*), **(4)** antioxidants (*see column 6, lines 31-35*), **(2)** UV light absorbers (*see column 6, lines 35-43*), **(5)** colorants, such as pigments or dyes (*see column 6, lines 51-52*), and **(6)** fillers (*see column 6, lines 53-54*). The teachings of Hata et al. demonstrate that these additives are recognized in the art as suitable additives for this type of composition (*for the production of fuel tanks*). In light of this, it has been found that the selection of a known material based on its suitability for its intended use supports a *prima facie* obviousness determination – *see MPEP 2144.07*.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to include the instantly claimed additives, as taught by Hata et al., in the composition of {Krass et al.} or {Krass et al. and Sakamoto et al.} because the teachings of Hata et al. demonstrate that these additives are recognized in the art as suitable additives for this type of composition (*for the production of fuel tanks*).

***Double Patenting***

21. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

22. Claims 2-7, 22, 23, and 26-28 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over the combined limitations of claims 1-3 & 5-17 of copending Application No. 11/578,078 (US 2007/0290176). Although the conflicting claims are not identical, they are not patentably distinct from each other because:

- the copending claims disclose the instantly claimed "hardener" as "at least one polybranched organic/inorganic hybrid polymer".
- Furthermore, the use of the instantly claimed additives/solvents in concert with this "hardener"/"at least one polybranched organic/inorganic hybrid polymer" would have been obviously envisaged in light of the specification (*see paragraph 0063 & 0075-0078 of the pre-publication*) – See: *In re Vogel*, 422 F.2d 438, 441-42, 164 USPQ 619, 622 (CCPA 1970); MPEP 804, II, B, 1.

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This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

23. Claims 2-4, 7, 18, and 22-28 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over the combined limitations of claims 1-24, 26, and 27 of copending Application No. 11/578,470 (US 2007/0260030). Although the conflicting claims are not identical, they are not patentably distinct from each other because:

- the copending claims disclose the instantly claimed "hardener" (*also method of making and method of using*) as a "particulate, polybranched organic/inorganic hybrid polymer".
- Furthermore, copending claim 27 (*use of said material for crosslinking thermoset plastics*) obviously embraces epoxy resins, which is a commonly recognized thermosetting material.
- Lastly, the use of the instantly claimed solvents in concert with this "hardener"/ "particulate, polybranched organic/inorganic hybrid polymer " would have been obviously envisaged in light of the specification (*see examples*) – *See: In re Vogel*, 422 F.2d 438, 441-42, 164 USPQ 619, 622 (CCPA 1970); MPEP 804, II, B, 1.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

24. Claims 2-4, 7, 18, and 22-28 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over the combined limitations of claims 1, 2, and 4 of

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copending Application No. 11/578,471 (US 2008/0039607). Although the conflicting claims are not identical, they are not patentably distinct from each other because:

- the copending claims disclose the instantly claimed "hardener" (*also method of making and method of using*) as a "particulate, polybranched organic/inorganic hybrid polymer".
- Furthermore, copending claim 4 (*use of said material for crosslinking thermoset plastics*) obviously embraces epoxy resins, which is a commonly recognized thermosetting material.
- Lastly, the use of the instantly claimed solvents in concert with this "hardener"/ "particulate, polybranched organic/inorganic hybrid polymer " would have been obviously envisaged in light of the specification (*see examples*) – *See: In re Vogel*, 422 F.2d 438, 441-42, 164 USPQ 619, 622 (CCPA 1970); MPEP 804, II, B, 1.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.



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***Communication***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Feely whose telephone number is (571)272-1086. The examiner can normally be reached on M-F 8:30 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Y. Pyon can be reached on 571-272-1498. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael J Feely/  
Primary Examiner, Art Unit 1796

September 17, 2010